



## Filing Receipt

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<b>REVIEW OF WHOLESALE</b>	§	<b>BEFORE THE</b>
	§	
<b>ELECTRIC MARKET DESIGN</b>	§	<b>PUBLIC UTILITY COMMISSION</b>
	§	
	§	<b>OF TEXAS</b>

**ERCOT STEEL MILLS COMMENTS ON COMMISSION QUESTIONS ON  
WHOLESALE MARKET DESIGN**

**TO THE HONORABLE COMMISSIONERS:**

NOW COMES the ERCOT Steel Mills (“Steel Mills”) and submits these comments in response to the Commission’s August 2, 2021, questions regarding ERCOT’s wholesale market design.

**I. INTRODUCTION**

The Steel Mills are a group of large steel production loads within ERCOT. We appreciate the opportunity to submit our response to the Commission’s request for comments. The Steel Mills purchase and consume large quantities of electricity to operate their respective mills and related support facilities. Given the highly energy-intensive nature of steel production, the Steel Mills have a strong interest in ensuring the continued reasonableness of energy costs for consumers as well as the ability of the ERCOT to maintain grid reliability and appropriate oversight of optimally structured wholesale markets for energy and ancillary services. The steel mills do not participate as a load resource in ERCOT’s Ancillary Services markets but do participate in ERCOT’s Emergency Response Service.

The Steel Mills offer the following preliminary comments on the issues outlined in the request. As it early in this process, we reserve the right to offer additional ideas, suggestions and recommendations and change our position as consideration of these issues moves forward.

**II. EXECUTIVE SUMMARY**

The Steel Mills offer the following summary of our comments as requested:

- We believe the ORDC curve works reasonably well as-is and does not need to be restructured. However, if changes are to be made, it is critical to maintain the scarcity

price signal by applying any increased ORDC adders only during scarcity conditions and not extend to or increase adders in intervals where there are sufficient reserves. Some stakeholders may suggest that the Commission apply increased ORDC adders (or some portion of them) only to dispatchable generation. One concern with doing so is that any effort to remove the adder from certain generation (renewables, for instance) would create a lot of complications, such as possibly producing two different real-time LMPs for different generation resources at the same node and different LMPs across a Load Zone when there is no congestion between the various nodes. Moreover, we do not want to discourage renewable generation, which also plays a very important role in the ERCOT market and helps to keep costs low for consumers. Also, we want to encourage all generation to be available and operate during times of scarcity. Reducing or eliminating the real-time ORDC adder for some generation seems to contradict this concept. As for the suggestion to limit ORDC to those who participate in the DAM, we understand the desire to encourage more generation participation in the day ahead market (DAM), but there are similar concerns regarding this approach. In any event, the ORDC should be included in the real-time settlement price to load so that consumers receive accurate price signals and can decide whether to respond by reducing or curtailing load.

- Like the concept of limiting generation that can participate in the RTM based on DAM participation, the concept of requiring all generation to offer a minimum commitment in the DAM as a precondition to participating in the real-time energy market gives rise to some concern that implementing it could result in unintended consequences and heightened reliability risk. Participation in the RTM is imperative for all generation resources as the DAM load forecast is always different from the actual load in the RTM and it is particularly important to have all-hands-on-deck in real-time during scarcity.
- At this point, we have not identified any new ancillary services that are essential to grid reliability during extreme weather conditions. It is important to consider both the costs and benefits of any proposed new services. A new ERCOT-administered reliability service aimed at increasing demand response might be helpful. The costs of any new

ancillary services should be allocated in a manner consistent with cost causation principles.

- We are not aware of the exact extent to which residential and small commercial customer demand response is currently captured by REP programs. However, additional opportunities likely exist and should be considered for enhanced demand response efforts by REPs and TDSPs.
- The current ERS rule generally continues to function well. At this point, we suggest that the Commission not attempt to directly manage ERS program design but rather retain the current rule, which delegates the detailed design of the program to the ERCOT staff. Major structural changes to the existing program should be avoided; any new ideas or potential improvements should be piloted separately from the current program – the goal should be to retain the existing model and allow it to continue to work. Stability in the program and rules is critical to maintain load interest and participation. If the Commission desires to incentivize growth in ERS participation, the Commission should consider raising the \$50 million annual expenditure cap.

### **III. RESPONSE TO COMMISSION QUESTIONS**

1. *What specific changes, if any, should be made to the Operating Reserve Demand Curve (“ORDC”) to drive investment in existing and new dispatchable generation? Please consider ORDC applying only to generators who commit in the day-ahead market (“DAM”). Should that amount of ORDC-based dispatchability be adjusted to specific seasonal reliability needs?*

The Steel Mills do not have specific changes to propose as to ORDC at this point. The ORDC has historically been reasonably successful in encouraging the addition of new generation capacity as well as the retention of existing generation capacity within ERCOT. It has also successfully fulfilled the essential function of providing loads and generation with price signals reflective of real-time grid conditions. When reserves are plentiful, the ORDC curve has a minimal and, at times, no impact on market clearing prices. As scarcity of available generation capacity

increases, the ORDC curve produces increasingly stronger price signals which motivate loads to reduce consumption and incentivize generators to increase the energy output of their on-line units and bring available off-line resources on-line.

When considering changes to ORDC with the intent to encourage investment in existing and new dispatchable resources, the Commission should be careful not to weaken the efficacy of the scarcity price signals which ORDC currently provides to loads and generation. Were the Commission to seek to increase the amount of ORDC revenue flowing to generation resources (which we do not advocate but recognize that some other stakeholders may), it would be critically important to grid reliability and market efficiency that ORDC only increase the LMPs produced by ERCOT's SCED algorithm when scarcity exists, and operating reserves are truly in short supply. Flattening the ORDC curve during non-scarcity intervals for the purpose of increasing the ORDC revenue stream would degrade the effectiveness of the ORDC price signals to load, decrease demand response during scarcity conditions, and increase the cost of energy for all ERCOT consumers. It would also provide a financial windfall to generators who do not necessarily have reliably dispatchable generation during times of scarcity. Finally, it would also be inconsistent with the underlying rationale for implementing the ORDC.

The Steel Mills believe the ORDC curve works reasonably well as-is and does not need to be restructured. If the Commission's goal is to specifically target additional investment solely in existing and new dispatchable generation, we are unsure how ORDC could effectively be modified to distinguish between dispatchable and non-dispatchable resources. Some may suggest that increased ORDC adders during true scarcity conditions be provided solely to on-line dispatchable generation. However, our concern with this approach is that it would produce a lot of undesirable complications. For example, were real-time dispatchable generation to get the ORDC adder and generation from wind and solar and possibly other resources were not to get the adder and were to be paid lower prices during scarcity conditions, this could result in two different real-time LMPs for different generation resources at the same node and certainly different LMPs across a Load Zone when there is no transmission congestion between the various nodes. The ORDC should encourage all generation (not just dispatchable generation) to be available and operate during times of scarcity. In addition, we are concerned that such an approach may discourage renewable generation, which also plays a very important role in ERCOT and reduces costs to consumers.

The Steel Mills need more detail regarding how the concept of applying ORDC solely to generation actually committed in the DAM would be structured, implemented, and administered before we can form an opinion as to whether such an approach would be effective in increasing reliability. It would likely significantly increase participation in the DAM, which may afford ERCOT more certainty as to how much generation is available for the operating day. However, it is not obvious to us how doing so can be expected to stimulate investment in new and existing dispatchable generation.

The concept of tying the real-time ORDC mechanism to the DAM commitment process could also give rise to unintended consequences. Should the Commission choose to move forward with this concept, special care must be taken to ensure that ERCOT always calculates the resulting LMPs for each Load Zone to both collect sufficient funds to pay the generation in that Load Zone and provide the correct settlement point prices to consumers who may wish to avoid those prices and reduce or curtail their consumption. Furthermore, at a minimum, it will be essential that ERCOT retain robust authority to force available generation capacity on-line for real-time operations using the reliability unit commitment (“RUC”) process. Greatly increased reliance on the RUC process would, however, result in a less efficient real-time market and distort market price signals. Instead of conditioning ORDC payments, perhaps a different approach or incentive can be identified that would better promote DAM market participation.

2. ***Should ERCOT require all generation resources to offer a minimum commitment in the day-ahead market as a precondition for participating in the energy market?***
  - a. ***If so, how should that minimum commitment be determined?***
  - b. ***How should that commitment be enforced?***

If a resource is required to submit an energy offer in the DAM to participate in the RTM, then you could get a lot of very high offers from resources wanting to preserve their right to participate in real time but are not serious about participating in the DAM. If the ORDC adders were to apply only to those resources with energy offers actually struck and thus committed in the DAM, and thus forced by policy to be available in the real-time market, then similar problems as those described above with different LMPs at the same node must be managed.

The concept of requiring all generation resources to offer a minimum commitment in the DAM as a precondition to participating in the energy market gives rise to some concern by the Steel Mills that implementing it, like the proposal discussed in question 1 above, could result in unintended consequences and heightened grid reliability risk. No matter how well ERCOT forecasts its capacity needs in the day-ahead market (“DAM”) the actual amount of capacity needed in real-time will be different. Precluding some generation resources from participating in the real-time energy market could potentially result in the unavailability of sufficient generation to balance supply and demand in real-time. Should the Commission decide to implement this concept, at a minimum, as discussed in response to question 1 above, it will be essential that ERCOT retain robust authority to force available generation capacity on-line for real-time operations using the RUC process.

***3. What new ancillary service products or reliability services or changes to existing ancillary service products or reliability services should be developed or made to ensure reliability under a variety of extreme conditions? Please articulate specific standards of reliability along with any suggested AS products? How should the costs of these new ancillary services be allocated?***

The Steel Mills have not identified at this point any new ancillary services which are essential to grid reliability during extreme conditions. Although additional ancillary services could be implemented, the challenge is whether those services could be implemented in a cost-beneficial manner. We will need to see the details of such concepts before we can reach any conclusion as to the viability and value of such services. Ancillary services costs are ultimately borne by ERCOT retail consumers and can be very difficult to reasonably hedge, increasing risk across all consumers purchasing energy in the ERCOT markets. A proliferation of new services could impose a substantial cost burden on retail consumers without commensurate benefit.

In an energy-only market, voluntary passive demand response to scarcity pricing, particularly during emergency conditions, is essential to grid reliability. Equally essential is ERCOT’s ability to drop load during Emergency Energy Alerts. The only non-ancillary service currently offered by ERCOT to accomplish demand response by dropping load at ERCOT’s direction is Emergency Response Service. Prior to market restructuring, utilities offered a variety

of demand response options to industrial customers (such as various interruptible and time-of-use service options). These concepts could be extended to residential and small commercial customers who may not receive robust price signals through their retail rate structures. A new service affording ERCOT the ability to shed residential and small customer loads, who would essentially be the first loads curtailed by ERCOT operators, in exchange for payment, might prove to be a valuable tool in ERCOT's reliability toolbox. However, a new service offering structured along these lines may merely duplicate what REPs are already doing with residential and small commercial customers to facilitate the ability of REPs to balance their supply and demand. The major difference would be the ability of ERCOT to directly call on residential and small commercial customers, or their REPs, to shed load as and when deemed necessary by ERCOT control room operators as opposed to the REPs who currently control when loads participating in their programs are incentivized or called upon to reduce consumption.

We recommend that the costs of any new ancillary services be allocated in a manner consistent with cost causation principles.

***4. Is available residential demand response adequately captured by existing retail electric provider ("REP") programs? Do opportunities exist for enhanced residential load response?***

While we believe additional demand response from all consumers is critically important to grid reliability and should be encouraged at every opportunity, we do not know how much demand response is currently being incentivized through REP programs. Residential and small commercial loads are a logical source for demand response growth within ERCOT's service area. REPs should have an economic incentive to offer demand response opportunities to their residential customers. The Commission might wish to consider encouraging REPs to offer more demand response incentives to residential consumers.

Since 2005, the installation of residential smart meter technology has grown explosively. Billions of dollars have been spent on the installation of residential smart metering within Texas, and that technology has greatly expanded the ability to offer new demand response opportunities for residential consumers. For instance, TDSPs and/or REPs could design new residential demand response programs that provide incentives for voluntary load response and/or utilize the ability to



turn residential loads off remotely. Residential customers could, for instance, be paid a bonus for agreeing to have their electricity cut off or agreeing to reduce consumption during periods of extreme scarcity. This could also be an incentive for small commercial and residential customers to install and utilize their own small behind-the-meter back-up generators.

***5. How can ERCOT's emergency response service program be modified to provide additional reliability benefits? What changes would need to be made to Commission rules and ERCOT market rules and systems to implement these program changes?***

In our view, a key to enhanced grid reliability in ERCOT, as well as a key to improving the functioning of the overall market, is facilitating and utilizing demand response. Increased participation in ERS, as well as the development of new demand response services, could improve the functioning of the ERCOT market and enhance grid reliability.

Over the many years ERS has been in place, the Commission and ERCOT have both repeatedly found ERS to be a very valuable tool for assisting ERCOT in its charge to maintain robust grid reliability. And it remains a highly valued reliability tool for ERCOT. As was the case with the 2011 February weather event, the ERS portfolio in the aggregate over-performed during Winter Storm Uri this past February.

For loads which do not have the requisite operating characteristics to participate in the market for ERCOT's ancillary services, ERS is currently the only structured ERCOT-administered demand response service available. It is essential that any modifications to ERS being considered by the Commission aim to maintain and increase future ERS participation. We do not believe any modifications to the current ERS rule are needed, with the possible exception of increasing the annual expenditure cap. If the Commission desires to substantially increase the amount of load participating in the program, an increase in the \$50 million annual expenditure cap should be considered.

The Commission's current ERS rule (§25.507) sets out the high-level parameters for the program, but defers the detailed ERS program structure, participation requirements and other terms and conditions to ERCOT, and specifically, the ERCOT staff as opposed to market participants. Leaving the design details and administration of the program to the ERCOT staff has worked well over the years the program has been in place. This has enabled the program to be revised and

improved more rapidly to fit ERCOT's evolving reliability needs than if the Commission had been required to resort to a series of time-consuming rulemakings to make those same revisions and improvements. Accordingly, we urge the Commission to retain the current concept and not attempt to directly manage the program details through the rulemaking process. There may be times when high level Commission policy input through the rulemaking process or otherwise may be needed, but the Commission's current ERS rule has worked well, and we believe that it will continue to work well in the future.

Lessons learned during the February outage event by ERCOT have already resulted in ERCOT staff initiating two new protocol revision requests, NPRRs 1087 and 1090. These NPRRs are intended to further improve the value, effectiveness, and administration of ERS service in the post-URI environment. NPRR 1087 would prohibit future ERS participation by certain critical loads and generation resource support loads. NPRR 1090 would implement several other changes to the program design to address a variety of lessons learned by ERCOT from Winter Storm Uri. These NPRRs are currently working their way through the ERCOT committee process and are projected by ERCOT to be in place before the next winter ERS contract term.

***6. How can the current market design be altered (e.g., by implementing new products) to provide tools to improve the ability to manage inertia, voltage support, or frequency?***

The Steel Mills currently have no recommendations at this point to offer in response to this question.

Respectfully submitted,

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